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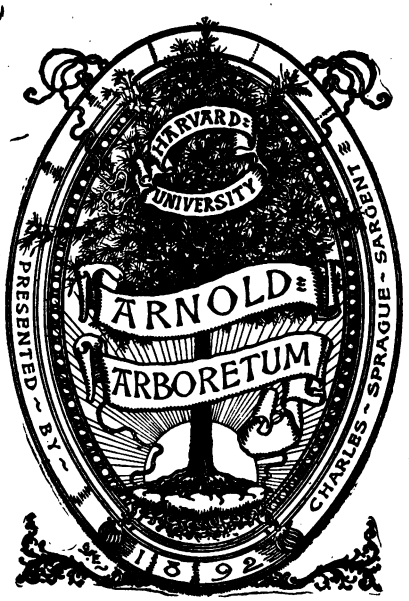

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MUHLENBERGIA

A Monthly Journal of Botany

Edited and Published by A. A. Heller

Volume 3

Los Gatos, California.
1907

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Los Gatos, California.

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Volume 3 No. 1

MUHLENBERGIA

A. A. HELLER, Editor

LOS GATOS, CALIFORNIA, JANUARY 30, 1907

SOME PLANTS ERRONEOUSLY OR QUESTIONABLY ATTRIBUTED TO SOUTHERN CALIFORNIA

BY S. B. PARISH

In a previous paper in Zoe, February-April, 1901, the writer indicated certain *plantae inquirendae*, whose presence, or place, in the flora of southern California was based on either ascertained error, or unsatisfactory evidence. One of the plants there mentioned, *Sambucus Mexicana*, has since turned up, Mr. Hall having collected it in the San Jacinto mountains; if, at least, we concede *S. velutina* to be identical with that species. But Mr. Hall's specimens suggest that *S. velutina* would be disposed of better as a variety of the common *S. glauca*.

The object of the present paper is to call attention to some other erroneous or questionable references. But first it is to be noted that the simple fact that a plant, purporting to have been collected by an early explorer, has not been rediscovered since, is by no means sufficient evidence of an erroneous record. It is true that our present acquaintance with the flora is far more intimate than that of the traveler, who passing hastily through

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the country, or tarrying for but a limited period, collected what came in his way. Yet the failure to rediscover such a plant may be due to its extreme rarity, and the happy chance of any day may bring it again to light; or it may be an actual disappearance. Most of us can call to mind more than one instance of such apparent extinctions, either at last re-established, or yet unaccounted for. Such experience should stimulate those who have the opportunity for search to endeavor the rediscovery of these elusive or doubtful plants.

But an early record is to be regarded with suspicion when it sporadically locates in one region a plant which later investigations indicate as belonging regularly to a different horizon. Especially does this doubt attach when the plant is said to be common;" for one may occasionally pick up a straggler quite out of its proper habitat. And, indeed, it would be strange did not errors sometimes occur, when one considers the ease with which locality labels, or numbers, might be misplaced in collections made during long journeys, perhaps of thousands of miles.

These early recorded plants that have failed of subsequent discovery must remain a doubtful element in our flora. A much more thorough acquaintance with our plant life must be acquired before they may be definitely dropped.

ANDROPOGON SCOPARIUS Michx. Fl. **1**: 87.

This grass was reported from "southern California" by Scribner in Am. Grasses, **1**: 19, on a specimen in the National Herbarium labeled "427 S. M. Tracy, 1887. Sabinda, Cal." According to Mr. Tracy it should read "472. Salida, Col."

PANICUM CAPILLARIOIDES Vasey, Cont. U. S. Nat. Herb. **1**: 54.

Reported by Scribner, Am. Grasses, **2**: 52, as extending from "southern California to Texas," but all the material in the National Herbarium is from the latter State, nor can I learn of any collections in our limits.

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STIPA PRINGLEI Scribn. Cont. U. S. Nat. Herb. **3**: 54.

"Dry slopes, Texas to Arizona and southern California," according to Scribner, Am. Grasses, **2**: 133. This also is unrepresented in the National Herbarium by Californian specimens.

TRIODIA PULCHELLA H. B. K. Nov. Gen. **1**: 155.

This strictly desert species is reported by Dr. Beal, Grasses N. A. **2**: 468, as collected by Palmer at "Los Angeles, Cal," an obvious error for Los Angeles bay in Lower California. It occurs, however, in the eastern part of the Colorado desert.

FESTUCA DASYCLADA Hack.; Beal, Grasses N. A. **2**: 602.

This also has been reported from "southern California," by Scribner, Am. Grasses, **2**: 280, but the only specimen in the National Herbarium is Parry's type from Utah. It may, however, reach our eastern borders.

ALLIUM PARRYI Wats. Proc. Am. Acad. **14**: 231.

Parry's type was collected at Bear Valley in the San Bernardino mountains, and not in the "Coast Ranges," as stated in the original description. It is abundant in that Sierran valley, and occurs sparingly elsewhere in the same neighborhood. Several of our alliums appear to be very local.

LILIUM WASHINGTONIANUM Kellogg, Proc. Cal. Acad. **2**: 13.

Palmer is reported to have collected this lily in the Cuyamaca mountains by Watson in Proc. Am. Acad. **14**: 255, and Bot. Cal. **2**: 165. These mountains have been well explored by several botanists, but no subsequent collections have been made; nor does the ascertained range of the plant indicate its presence so far south. There can be little doubt of the erroneousness of this reference.

QUERCUS MORRHUS Kellogg, Proc. Cal. Acad. **2**: 36.

This oak is reported as collected on Santa Catalina Island by Dill, Gard. & Forest, **5**: 72. It is regarded by Greene, W.

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Am. Oaks, 79, and Sargent, Sylva, **8**: 119, as a hybrid between *Q Wislizeni* and *Q. Kelloggii.* As neither of the supposed parents are known from the island, or are likely to be found there, either the hybridity of this oak, or its presence on the island, must be an error.

THELYPODIUM LACINIATUM Endl. Gen. Pl. 876.

This has been reported from Santa Catalina Island, but without doubt by inadvertence for *T. lasiophyllum* Greene, a species known to occur on the island, and widely distributed on the adjacent mainland. There is no specimen of *T. laciniatum* from the island in the Brandegee herbarium.

LUPINUS ARIZONICUS Wats. Proc. Am. Acad, **12**: 250.

Parry and Lemmon's collection of this plant, given as "near San Bernardino," in Bot. Cal. **2**: 440, was made at or near Whitewater, in the Colorado desert. The species is strictly a desert one.

OXALIS CORNICULATA L. Sp. Pl. 435.

This has been reported several times from our region: Bot. Cal. **1**: 96, "most common south of Santa Barbara;" Davidson, Pl. Los Ang. Co., "foothills from Santa Monica to Pasadena;" McClatchie, Fl. Pasad. 635, "frequent along streets." Yet it is doubtful if it occurs otherwise than as an escape, as in McClatchie's note. As such the variety *atropurpurea* Planche, has established itself in places in the streets of San Bernardino, notably affecting the crevices of pavements. The other references are to a plant common on the mesas near the coast and for some fifteen miles or more inland in the canyons of the coast mountains. All that I have examined are referable to *O. Wrightii* Gray, but quite possibly *O. pumila* Nutt. may be detected in the coast mountains.

CONDALIA PARRYI Weberbauer, in Eng. & Prantl, Nat. Pfl. **3**: Abt. 5. 404.

Zizyphus Parryi Torr. Bot. Mex. Bound. 46.

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Parry's second station noted in Bot. Cal. **1**: 100, as "east of San Bernardino," should be Whitewater canyon, which makes into the San Bernardino mountains from the Colorado desert. It is exclusively a desert species.

MAMILLARIA ARIZONICA Engelm. in Brew. & Wats. Bot. Cal. **1**: 244.

In characterizing this species Dr. Engelmann expressed the opinion that it probably would be found to extend into southeastern California. Its authenticated range indicates this as highly probable, but as yet it has not been discovered within the State limits. Dr. Coulter in Cont. U. S. Nat. Herb. **3**: 121, cites a specimen from California collected by Parish in 1880. This is in the Engelmann herbarium, and consists of three separate areolae with their spines, and has a label, in Dr. Engelmann's handwriting: "Mamillaria Arizonica? deserti?" It certainly came from the same plants on which Dr. Engelmann subsequently founded his *M. deserti*. Dr. Coulter very properly reduced both species to varieties of *M. radiosa* Engelm.

OPUNTIA MOJAVENSIS Engelm. & Bigel.; Engelm. Proc. Am. Acad. **3**: 293.

This is founded, in two lines of description, on a specimen collected by Bigelow in 1853, "on the Mojave, west of the Colorado." In Pac. R. R. Rep. **4**: 40, this specimen is said to consist of "a few fragments, with a sterile fruit," and plate *9, f. 6-8*, shows a "sterile and degenerate" fruit and two bunches of spines, neither fruit nor spines exhibiting any distinguishing characters. The specimen, such as it is, is still preserved in the Engelmann herbarium, at the Missouri Botanical Garden, according to Coulter, Cont. U. S. Nat. Herb. **3**: 427. Dr. Engelmann himself, at a later period, appears to have regarded the species as of doubtful validity, for in Bot. Cal. **1**: 248, he says he "merely indicated it, for the attention of future explorers." In any case it could be identified only conjecturally, since the type had neither flower nor perfect fruit, and, in fact, consists of little

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more than a few spine-clusters. Fifty years have elapsed without any further traces being discovered of this supposed species, yet it still holds a place in our books. It would seem that the time has come for dropping it.

LOMATIUM VASEYI C. & R. Cont. U. S. Nat. Herb. **7**: 216.

George R. Vasey's type specimen is quoted from the "San Bernardino mountains," in Bot. Gaz. **13**: 145. It really came from the mesas near San Bernardino. The species is a mesa plant, rarely reaching the lower foothills, and never the mountains.

FRASERA PARRYI Torr. Bot. Mex. Bound. 156.

The type is said to have been collected "in the mountains east of San Diego, on the eastern slope." This appears to bring it into the desert region, and to that extent is probably an error, as the plant belongs to the cismontane flora.

MIMULUS INCONSPICUUS Gray, Pac. R. R. **4**: 120.

The type specimen, in the Gray herbarium, is labeled: "Damp hillsides, Los Angeles, Bigelow, 1854." It consists of a few poor scraps, and Dr. Jepson, who obligingly examined it at my request, thought it apparently identical with Dr. Gray's more recently described var. *latidens* from the vicinity of San Diego. Resident botanists have not yet succeeded in discovering either species or variety at Los Angeles, nor does the species appear to have been collected in recent times in southern California.

MALACOTHRIX INCANA T. & G. Fl. N. A. **2**: 486.

Nuttall is reported to have collected the type of this species on "an island in the bay of San Diego." The place intended is probably the Coronados Islands, beyond the Bay of San Diego, and belonging to the Mexican State of Lower California. The plant has been rediscovered in recent times (1886) on the island of San Miguel.

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CHRYSOPSIS VILLOSA SESSILIFLORA Gray, Syn. Fl. 1: Part 2. 123.

This plant is said by Dr. Gray to grow "near the coast, from Mendocino Co. to San Diego and Arizona." Dr. Jepson reports it as rare within the limits of his Flora, but "common southward." I have never been able to see an authentic specimen from southern California, and it is certainly not common. Plants listed under this name by Davidson, Pl. Los Ang. Co. 13, and by McClatchie, Flora Pasad. 644, are monocephalous forms of *C. fastigiata* Greene, a species very different in pubescence, leaf and head from true *C. sessiliflora*.

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A NEW CLOVER

By P. B. Kennedy and Laura F. McDermott

Trifolium orbiculatum

Plant 1 to 2 dm. high, perennial, not involucrate, stems covered with short white pubescence, leaflets pubescent along the midrib or on one-half of the under side: root stout and long: stems erect: stipules at base longer and more linear than those above, all acute, adnate one-half to two-thirds their entire length, .5 to 1 cm. broad and 1 to 1.5 cm. long, lobes irregularly tridentate near apex, lanceolate and very slightly villous: leaflets .6 to 1.6 cm. broad, and .8 to 2.5 cm. long, lower leaflets smaller, generally broadest at the base, tapering to a cuspid apex; upper leaflets broadly oblong, rounding at the apex, some nearly orbicular to deltoid; petioles of lower leaves 6 to 8 cm. long; upper petioles 3 to 4 cm. long: peduncles axillary, assurgent, 4 to 10 cm. long: heads terminal or binate, completely reflexed in age by the deflexion of the pedicels: lemon yellow flowers on long pedicels 12 to 15 mm. long: calyx dull green, 7 to 9 mm. long, 10-nerved, alternating nerves inconspicuous, outer surface covered with short white pubescence, teeth 4 to 5 mm. long, slightly longer than the tube, very inconspicuously cross veined, with an occasional bifid tooth: vexillum 6 mm. broad, 17 mm. long, apex rounding, sometimes slightly emarginate, base abruptly tapering; blade of wings nearly 1 cm. long, reflexed, tip rounding, base auricled; blade of keel 3 mm. broad, 5 mm. long, broader than the wing, beak obtuse: ovary villous-pubescent, 2-ovuled; pod 1-seeded; seed obcordate.

The type, which is deposited in the Nevada Agricultural Experiment Station herbarium, was collected at Thompson Falls, Montana, June 7, 1902, by J. W. Blankinship, no. 6.

Its nearest ally is *T. latifolium* (Hook.) Greene, from which it differs in the shape and texture of the leaves, the leaves being decidedly thick as compared with *T. latifolium*. The long reflexed pedicels of the flowers and the much larger wing as compared with *T. latifolium* give it distinct specific characters.

Nevada State University, Reno, Nevada.

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SOME NEW NAMES

By T. D. A. Cockerell

The following corrections of nomenclature are offered in view of the forthcoming new edition of the Catalog of North American plants:

Isoetes echinospora brittoni

Isoetes braunii Durieu, Bull. Soc. Bot. France, **2**: 101. 1864. Not *Isoetes braunii* Unger, Gen. et Sp. Plantarum Fossilium, 597. 1850.

Salix cascadensis

Salix tenera Anders. DC. Prodr. **16**: Part 2. 288. 1864. Not *Salix tenera* A. Braun, in Unger, Gen. et Sp. Plantarum Fossilium, 418. 1850.

When working on *Hymenoxys*, I had occasion to examine *Syntrichopappus lemmoni* Gray, and concluded that it ought to be separated from *Syntrichopappus* as a distinct genus, thus:

Microbahia gen. nov.

Close to *Syntrichopappus*, but pappus entirely absent: rays rose-purple without yellow: leaves entire.

Microbahia lemmoni (Gray)

Actinolepis lemmoni Gray, Proc. Am. Acad. **16**: 102. 1881.
Syntrichopappus lemmoni Gray, Proc. Am. Acad. **19**: 20. 1883.

Boulder, Colorado.

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NEW WESTERN PLANTS

By A. A. Heller

Cakile Californica

A stout glabrous succulent much branched annual, 4 to 6 dm. high, the spread of the branches often exceeding the height: leaves thick and fleshy, oblong-ovate, the largest 8 cm. long, 3 cm. wide, the apex blunt and rounded, the base tapering into the broad petiole, the margins sinuately toothed: sepals oblong, a little over 3 mm. long, over 1 mm. wide, slightly narrowed above but not acute, thick, yellowish, convex on the outside: petals pale purple, 6 mm. long including the claw, blade about 4 mm. long, 2 mm. wide, the claw 2 mm. long, shorter than the sepals, barely 1 mm. wide: filaments stout-filiform, the short ones 3 mm. long, the long ones 4 mm.; anthers bright yellow, about 1 mm. long, oblong, curved: style 4 mm. long, thick, 1 mm. in diameter, with the stigmatic apex very slightly three-lobed: pods about 15 mm. long, without lateral projections at the nodes, the lower joint obovoid, about 5 mm. long, 5 mm. across the top, neither angled nor ribbed; upper joint broadly ovoid, 1 cm. long, 3 mm. across, faintly two-ribbed below, strongly so at the flattened retuse apex.

The type, in my herbarium, is my no. 6856, collected on the beach at Monterey, California, near the railway station, June 29, 1903, the description made from living material. But the shrunken pods in the dried specimen present a very different appearance. In these the lower joint is usually, but not always, 4-ribbed, the upper strongly 4-angled from base to apex, the apex pointed as well as flattened. In the dried state the pod more nearly agrees with the descriptions of *C. edentula*, under which name our plant has been known. In his Flora Dr. Small describes *C. edentula* as having the upper joint 4-angled only near the base, and says the claw of the petal is longer than the blade, whereas in our plant the claw is only half the length of the blade.

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On geographical grounds alone one should not expect *C. edentula* to occur in California, for almost without exception no species native to the Atlantic coast is found here. Through the kindness of Mr. Walter Deane, I have been able to examine fresh fruiting specimens of *C. edentula* from Boston, the type locality, which show that the fruit is smaller and more elongated than ours, with a point twice as long and more slender. The mature pod is about 2 cm. long, the lower joint 7 mm. long, 4 mm. across; upper joint 12 or 13 mm. long, including the beak of 4 mm., the body 7 mm. across, the beak not retuse, merely truncate and narrowed at the apex which is rarely 2 mm. across.

Ribes Suksdorfii

Shrub, probably 1 to 2 meters high, young branches slender and wand-like without bristles, bark grey: infrastipular spines brown, solitary, small, ascending, 5 mm. long or less: leaves thin, broadly ovate in outline, the blade 3 cm. long and as wide, plainly 3 or indistinctly 5-lobed, the sinus between the lobes narrow, margins irregularly toothed, the segments commonly rounded and obtuse, ciliate, the base truncate or slightly cordate, both surfaces pubescent with short semi-appressed hairs, especially the lower; petioles slender, a little shorter than the blades, more or less pubescent: peduncles proper slender, drooping, 15 mm. or less in length, 3-flowered, glabrous: a rounded ciliate bract at the base of each pedicel, two nearly equal pedicels springing from the first bract, one of them forked about 5 mm. above the base, where there is a second bract from which arises the third pedicel, also bearing a bract about 5 mm. from the base: calyx greenish on the outside except the purple edges of the lobes, about 8 mm. long commonly glabrous on the outside except sometimes for a few hairs on the outside of the lobes, the tube narrowly funnelform, 3 mm. long, 2 mm. wide across the top, pubescent within, the finally reflexed lobes oblong, 5 mm. long, 2 mm. wide, blunt and rounded at apex, purplish or dull red on the inside: petals white or pinkish, 3 mm. long, 1 mm.

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wide at base, 2 mm. wide across the top, the edges somewhat inrolled: stamens exserted 2 mm. from the unreflexed calyx, anthers oblong, 1 mm. long: style commonly a little exceeding the stamens, 2-parted down almost to the petals, densely villous for nearly its entire length: ovary glabrous.

The type, in my herbarium, was collected somewhere in Washington in 1897 by Mr. W. N. Suksdorf, to whom I take pleasure in dedicating the species. It is part of a consignment of several species collected for me in quantity by Mr. Suksdorf and laid aside for the past ten years, the record which accompanied the plants apparently lost. The plant is no doubt from the eastern slope of the Cascades near the Columbia river in Klickitat county, as I think Mr. Suksdorf resided at White Salmon at that time.

It is related to *R. divaricatum*, but differs from that species in the absence of "bristle shaped prickles" on the young branches; in having only a single small straight ascending spine instead of "one or three large, strong, deflexed prickles under each bud;" the leaves are not "smooth and veiny;" the calyx is hardly "bell-shaped," and the petals are narrower with a more claw-like base than those of *R. divaricatum*, which apparently is restricted to the wet country on the west side of the Cascade mountains.

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EDITORIAL

After nearly seven years as a private enterprise, devoted almost exclusively to my own writings, I have decided to throw this journal open to the botanical public rather than start a new publication, for I am convinced that a journal such as I hope this one may become is badly needed.

A great many people are interested in plants—just plain ordinary plants that grow in the woods and fields—but are not interested in the learned papers which are worked out in the laboratories of our institutions of learning. It is our intention to exclude all such highly technical articles, and keep the publication as it has been from the beginning, a journal devoted to systematic botany. And furthermore, we intend to deal only with flowering plants, and perhaps ferns, although the *Fern Bulletin* should properly be the medium for publication on the latter. There are journals devoted exclusively to cryptogams, and they should be able to take care of all that is written in their particular lines, the *Bryologist* dealing with mosses, hepatics and lichens, and the *Journal of Mycology* with fungi.

There may be some who object to articles taken up by the descriptions of new species. The making of new species is a necessary evil, for many parts of our vast country are imperfectly explored, many plants are of local distribution, and each year brings out new species as new territory is looked into, old ground gone over more thoroughly, or the botanical "trash piles" turned over and critically examined. The true botanist and lover of plants derives much pleasure in searching out and knowing the peculiarities of the different species with which he comes in contact, and the more he does of this, especially in the field—for no true study of plants can be carried on without intimate field knowledge—the more he finds to segregate.

This brings us to an important point. The man who goes out and communes with nature, be he professional or amateur, sees things, and is very liable to discover new facts about old

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plants. He may find them growing under unusual conditions, or out of their recorded range, or some character may be exhibited which he does not find in descriptions. The things he may discover are legion, and the discoveries should be recorded. We should be pleased to furnish the medium for imparting them to others.

Now something about MUHLENBERGIA, its origin and name. The writer, like many others, had articles to publish, and sometimes had to do considerable engineering in order to have space granted for them, to say nothing of delays in printing. He therefore began to plan a magazine exclusively for and by himself. For at least a year before the first number appeared in 1900, he had decided upon the name. To western botanists especially the name of Muhlenburg is scarcely known, but he was one of the foremost botanists of the early part of the century just closed. His writings were less voluminous than those of some of his contemporaries, only two volumes having been published, one the "Catalogue" occasionally cited in works on eastern botany, the other the "Descriptio uberior Graminum et Plantarum Calamarium," published in 1817, the year after his death.

He was a Lutheran minister, for many years pastor of Trinity church in Lancaster, Pennsylvania, the city in which I had my home for about twenty years, where my first love for plants and things botanical was engendered, and what more fitting than that I should thus commemorate the name of the pioneer whose favorite haunts I no doubt visited, and gleaned many treasures from the places where he also found his, some of them species which bear his name as author.

Professor P. B. Kennedy, of the University of Nevada, at Reno, Nevada, is to be greatly congratulated upon his forthcoming monograph of the species of the genus *Trifolium* which occur in this country north of Mexico. It is to be not only a monograph in the botanical sense, but will also deal with the

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economic possibilities of the various species. Each species will be illustrated by a plate showing the entire plant as well as enlargements of the floral parts made from camera lucida drawings. It is an undertaking which should have the hearty cooperation of all botanists in every way possible. *Trifolium* is a large genus, about 150 species, mostly native, occurring north of Mexico, and all but 15 of them are found from the Rocky mountains westward. Over 80 of the total number are found in California, many of these not occurring beyond the borders of the State, and a large proportion of restricted range. In 1876, in Proc. Am. Acad. **11**: 127-131, Watson gave a short synopsis of the genus, listing 39 species. Since that time no attempt has been made to treat the genus as a whole, but many species have been described in scattered publications. As a result, the determination of species in the genus is difficult, and Professor Kennedy's work will be of incalculable benefit.

The good people of our sister State of Nevada will be surprised to learn that they have been annexed to California. We here in California have had nothing to do with the matter, so they must look to Europe, where the act was consummated, for redress. In the Bulletin de la Societe Royale de Botanique de Belgique, **42**: 183-200, July 10, 1906, just received, Michel Gandoger has a paper on the genus *Eriogonum*. He cites eighteen species and varieties from Nevada, and without exception Nevada is credited with being a part of California. The following are some of the anomalies: "California, sierra Nevada ad Reno;" California, in sierra Nevada ad Wadsworth;" "California. Stampede Ecklo Co, in sierra Nevada," intended for "Stampede, Elko county, Nevada," a point many miles to the eastward of the Sierra Nevada. Another novelty is "California, in regione Nevadensi ad Sierra Walley." This looks as if California may have been dumped into Nevada. Whatever its intended meaning, the true interpretation is evidently "California, in the Sierra Nevada, in Sierra valley," which is in Sierra

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county. It seems to us that when a botanist undertakes to describe plants from a country with the geography of which he is totally unfamiliar, he should consult a reliable atlas, or at least give the data on the labels and nothing more.

If the work were a monograph with complete and accurate keys, the short descriptions might suffice, but there are no keys, and we fear that if the new species and varieties are to be recognized at all, it is because in most cases numbered specimens from well-known collections are cited as the types. There are also some deliberately coined homonyms. On page 186 occurs *E. alatum* var. *Macdougalii*, while *E. Macdougalii* appears on page 191; *E.* "*anemophyllum*" Greene, var. *Cusickii*, page 186, and *E. Cusickii*, page 183; *E. nevadense*, page 188, *E. ovalifolium* var. *nevadense*, page 193, and *E. umbellatum* var. *nevadense*, page 188; *E. Cusickii* var. *californicum*, page 198, and *E vimineum* var. *californicum*, page 199. Should the plants which these homonyms represent prove worthy of names, there is an opportunity for some American botanist to assign other names to them, as well as fully describe them.

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Application for entry as second class matter at the post office at Los Gatos, California, filed January 30, 1907.

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A. A. Heller, Editor
Box 58, Los Gatos, California.

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A Monthly Journal of Botany

Edited and Published by A. A. Heller

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Los Gatos, California.

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A. A. Heller, Editor
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Volume 3 No. 8

MUHLENBERGIA

A. A. HELLER, Editor

LOS GATOS, CALIFORNIA, DECEMBER 7, 1907

NOTES ON THE FLORA OF PALM SPRINGS

BY S. B. PARISH

Palm Springs is situated on the western rim of the Colorado desert, in a little arm of it which is sheltered under the rugged flank of San Jacinto peak. It is thus protected, to a great extent, from the harsh winds, and the violent sand-storms, which so frequently rage over the open desert, and which have piled up the mighty sand hills glittering in the distance. The acclivities of the encircling mountains are of scorched and naked rock, wholly destitute of soil. The floor of the valley itself is mostly of coarse sand and gravel, the detritus of the surrounding mountains. In the spring the melting snows of San Jacinto fill the narrow canyons with abundant streams of clear, cold water, which soon sinks in the thirsty sands of the desert. A warm sulphur spring rises in the plain, and still retains with the white inhabitants the reputation for healing virtues which, in former times, drew the desert Indians to its waters. The valley has an altitude of only 500 feet above sea level, and its dry, pure air, throughout the winter months, is singularly soft, yet invigorating. The summer heat is excessive, and obliges most of the inhabitants, white and Indian, to seek a cooler climate.

Five families constitute the permanent inhabitants of the palm shaded village; and the Indians, whose reservation occupies the best part of the valley, have dwindled to but twenty-five

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individuals. In the winter the population is much increased, a goodly number of visitors finding shelter in the rustic hotel and its cottages. They are mostly sufferers from tuberculosis, a disease for which the climate is particularly helpful.

Time was when the valley had a much larger population, when a narrow-gague railway connected it with the main line of the Southern Pacific, and a stone-lined aqueduct conducted the floods of the distant Whitewater to its thirsty soil; when it was dotted with homes and embosemed in orchards and vineyards. But years of drought came, the indispensable water failed, and to-day trees and vines are dead, the aqueduct is filled with drifted sand, the houses are abandoned, and straight across the desert stretches the bare road bed of the railway, stripped of its iron and ties. It is a depressing scene of misdirected enterprise and disappointed hopes.

The earliest scientific visitor to the valley was Professor William P. Blake, who encamped at the springs on the 15th of November, 1853, while engaged on the Pacific Railway surveys. His report contains an interesting note on the vegetation of the place, but no botanical collections were made. In 1876 Parry and Lemmon made the first botanical exploration of this part of the Colorado desert, and gathered here, and at Whitewater, many rare and interesting species, not a few of which were made known to science through their collections. Mr. W. G. Wright was a frequent visitor in 1877-78, and succeeding years. He also found here several undescribed plants, as well as a number of entomological novelties. My own first journey was in January, 1880. In later years the place has been visited by most of the California botanists, and by some from the east, and numerous additions to its known flora have resulted from their collections.

In early reports Palm Springs appears under its Spanish name of Agua Caliente, and usually it was erroneously located in San Bernardino county. In reality it then belonged to San Diego county, but now is included within the boundaries of Riverside county.

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Having revisited Palm Springs in April of the present year (1907), and in the company of my friend Mr. Wright, it has occurred to me that a few notes on some of the plants seen there might not be without interest.

The first thing to attract the attention of the botanist, as he wanders amidst the distinctively desert vegetation, is the occasional sight of a plant from the cismontane flora, beyond the San Gorgonio pass. There are a few plants, of which *Salvia Columbariae* and *Stylocline gnaphalioides* are the most abundant, that seem equally at home on either side of the mountains, so that it is only by a consideration of their entire range that their true position can be determined. But those to which I refer are evident strays, of which only a few, or even but a single specimen may be found. Such plants as *Phacelia Whitlavia*, *Lupinus densiflorus*, *Hosackia maritima* or *Mimulus exilis*, seem strangely out of place in the society of their desert kindred. Even the costal flora of San Diego finds representation in an occasional plant of *Jepsonia Parryi*, or of *Adiantum emarginatum*.

The mesa supports an abundant growth of *Sphaerostigma pallida*, a species recently segregated by Mr. Abrams from *S. bistorta*. Here also is found the beautiful and fragrant *Abronia aurita*, separated by the same author from *A. villosa*. Both of these segregates represent cismontane species, modified by a difference of environment. With them, and as plentiful, grows *Coldenia Palmeri*. a typical desert plant. In a former paper (Erythea **6**: 91) I stated that this species grows from a running root, but the careful excavation of numerous individuals proves this to be an error. It is really from a deep-seated perpendicular root, from which spread out numerous slender wiry stems, having the appearance of roots, and it is these which are seen in herbarium specimens. *C. brevicalyx* has a stouter perpendicular root, which branches at the surface. We failed to rediscover the latter species, although a careful examination was made of the wash of Chino creek, where Mr. Wright found the specimen which became the type, in part, of the species. But

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in 1905, Mr. H. M. Hall collected it in McCoy's Wash, considerably further east in the desert. Palm Springs is probably the western limit of its distribution.

Plantago scariosa is very common on mesas and hillsides, and with it often grows the closely allied *P. erecta*, the common species, in similar places, in the cismontane region. Immediately west of the warm springs, Mr. Wright collected, years ago, the type specimens of *Gilia maculata*, from which alone the species was known. To our disappointment the most careful search was unrewarded by a single specimen, perhaps because much of the spring vegetation was already dried up. Great then was my gratification, shortly after my return home, at finding among some desert plants, sent me for identification, specimens of this rare little Gilia, marked "very abundant." They were collected by Mrs. Charlotte M. Wilder, a botanist whose keen powers of observatian have led to many fortunate discoveries. She had gotten it on the sands of the Whitewater, about half way between the station of that name and Palm Springs.

A most interesting locality is Tauquitz canyon, as it is now called, but which was formerly known as West canyon. It is a deep cleft in the scorched hills west of the village. Over the great blocks of stone which fill its narrow floor, pours down the stream of cold water which supplies the needs of the villagers. At a distance of little over a mile from its mouth, further exploration is prohibited by the closing in of its precipitous walls, over which the water drops in a charming cascade. It is filled with a luxuriant growth of characteristic desert plants, shrubs, and herbs both annual and perennial, and its short distance is the type station for seven species.

Brandegea parviflora, the first to be described, is no longer to be found here, but several botanists have recently obtained it in places farther east in the desert. Here Mr. Wright collected the specimens on which *Micrampelis leptocarpa* was founded. Field study at the type station convinced us that it was a leaf

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form of *Echinocystis macrocarpa** which grows here in typical form, as also others with the leaf characters assigned to *M. leptocarpa* more or less developed, so that the two clearly run together. No distinctions could be found in the flower, or in the fruit, which is six seeded.

Another of Mr. Wright's discoveries in this canyon was *Mirabilis tenuiloba*, an excellent species, well characterized by the long, narrow lobes of the involucel. The whole plant is clammy-viscid; the flowers are white, and more campanulate than those of *M. Californica.* It grows mostly in large compact clumps, but sometimes it is straggling, and supports itself on shrubs. On the western side of the canyon, where most exposed to the sun, the plants were loaded with ripe seed, but on the shaded eastern bank they were yet in full flower. Both this species and *M. aspera* are more tolerant of exposure to the sun than is *M. californica. M. aspera* is very common in both the Mojave and the Colorado deserts, and where it grows far out in those arid regions it is very distinct, having much the habit of *M. tenuiloba*, although more commonly straggling in its growth, the foliage rough, only the inflorescing tips of the stems viscidulous, and the flowers small and white. On the confines intermediate forms appear, with less roughened foliage and larger purplish flowers, which connect it too closely with *M. californica*, of which it may be regarded as a subspecies.†

This canyon is also the type locality for several species characterized from specimens collected by the present writer. Of these *Delphinium Parishii*, a plant with loosely flowered spikes of light blue flowers, is quite common on the hills in this part of the desert. On the margin of the stream was collected the type specimen of *Eleocharis Parishii*, and there also grew the tussock of robust sedge that furnished the material on

Echinocystis macrocarpa* forma **leptocarpa. *Micrampelis leptocarpa* Greene, Pittonia **2**: 282. 1892.

†*Mirabilis californica* Gray, subsp. **aspera** n. comb. *M. aspera* Greene' Erythea **4**: 67. 1896.

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which *Carex vitrea* was founded, the only Carex known to reach even the borders of the desert. *Selaginella Parishii* completes the list of these type plants. It is common, growing about stones, and in rock crevices, often in company with *S. Bigelovii*, the cismontane species. They are readily distinguishable by their gross characters; the creeping and rooting stems of the first species are flattened, while the stems of the second are quadrangular and erect.

There are other interesting canyons, Chino, Andreas and Murray, in each of which grow plants not found in any of the others. Our limited time, however, permitted us to visit only Palm canyon, at the extreme head of the valley.

Just before entering it the road passes through a sandy wash, in which were growing many plants of *Mimulus Bigelovii*. On the right, in rough stony ground, grew *Salvia Vaseyi*,* only a single shrub showing a few early flowers. This is by no means a rare plant in the Colorado desert, but it has seldom been collected, as its season of flowering is later than that usually chosen by botanists for their desert explorations. From the cliff on the left hung masses of *Philabertia hirtella*,† certainly a distinct species.

The canyon takes its name from the fine grove of fan palms which fill it for a mile or more, crowding the narrow stream bed, and straggling up the rugged sides. Few plants of interest were found here, the best being a few robust clumps of *Juncus Cooperi*, growing along the edge of the stream. The stems are

*__Salvia Vaseyi__ (Porter) *Audibertia Vaseyi* Porter, Bot. Gaz. **6**: 207. *Ramona Vaseyi* (Porter) Briquet in Engler & Prantl, Natpfl. **4**: 287; and independently by Heller, Muhlenbergia **1**: 59.

†__Philabertia hirtella__ (Gray) *P. heterophylla* var. *hirtella* Gray, Syn. Fl. **2**: Part 1, 88. *Philabertella hirtella* Vail, Bull. Torr. Club **24**: 309. Climbing over shrubs, or pendant from rocks; the whole plant gray, with a fine cinerous pubescence; stems slender and twining, 2-3 m. long; leaves in pairs, distant, linear, 3-4 cm. long, the petiole short, or the upper leaves sessile; peduncles 1-2.5 cm. long, and pedicels 6-15 mm. long, each subtended by a short, linear bractlet; flowers 6-15, greenish-white; follicles in divergent pairs, long-beaked, and at least 5 cm. long.

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very stiff, and about a meter in height. *Hosackia rigida* was in ripe fruit. The pods are brown, glabrous and shining, 2.5-3.5 cm. long; seeds 15 or more, short-oblong, 2. mm long.

A day was devoted to the exploration of the precipitous cliffs which form the eastern barrier of the valley. Here, in the dryest and barrenest of soils, were growing many characteristic desert plants, in fine condition—*Hoffmanseggia microphylla*, *Mentzelia involucrata*, *Mohavea viscida*, *Chaenactis carphoclinia*, and others. In places the ground was brightened with the daisy-like *Eremiastrum bellioides*. But most interesting was *Langloisia setosissima*, growing on the talus of the cliffs. The plants were 3-5 cm. tall, stiffly erect, the stems simple, or few-branched, the flowers of a clear bright blue, borne in terminal flat-topped clusters. It is quite distinct from *L. punctata* of the Mojave desert.

The return across the valley afforded a good opportunity for observing the arboreal flora. The most abundant tree is *Dalea spinosa*, growing, for the most part in small groves, on the coarser soils of the mesas. The slender, spinescent branchlets are densely matted, and the whole tree has a dingy appearance, due to the gray-green color of the bark. Only the closest inspection detects a few insignificant pinnate leaves. But in June it is said to clothe itself with a mantle of rich purple blossoms.

The desert willow affects dry water-courses, and while it has graceful foliage and showy flowers, its habit is usually straggling and ungainly. An occasional well-shaped specimen demonstrates its possibilities,

The handsomest as well as the largest tree of the valley is *Parkinsonia Torreyana*. A noble specimen in the edge of the village has a spread of branches of 16 m., and its whole top was a dome of golden yellow blossoms.

An interesting tree, growing in canyons, is *Condalia Parryi*. Usually of rough habit, and often little better than a shrub, it sometimes attains a height of over 5 m. and a presentable outline. The finest specimens are to be found in Snow Creek can-

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you, some miles to the west. Its broad, thin leaves are bright green, presenting an agreeable contrast to the somber and cramped desert vegetation. The trees were well loaded with plum-like fruit, nearly ripe. The drupes are pulpless, with a hard, thick putamen; there is no albumen, and the cotyledons are thin, foliaceous and green. It is a structure well adapted to protect the seed from the attacks of rodents, who would learn how slender was the reward for gnawing thro the hard shell; but it must be difficult for such a seed to germinate under the arid conditions of its habitat.

If trees are few, both in numbers and in species, shrubs are numerous and multifarious. *Dalea californica* and *D. Schottii* hung out their purple racemes, and the entangled branches of the misnamed *Krameria parviflora* were almost hidden with flowers of a darker shade of the same color. *Beloperone californica* was loaded with its blossoms of dull red, a color seldom displayed by the plants of the desert. The ill-smelling *Isomeris arborea* was well set with fruit. There is a considerable difference in the pods of this shrub. That which is usually considered as typical, and which is abundant on both the Colorado and Mojave desert, has an inflated oblong fruit, acute at the apex. The variety *globosa*, which I have never found in the desert, but which is common on the sea coast of San Diego county, has an inflated globose fruit. A third form, occasionally seen about Palm Springs and Whitewater, has a narrow uninflated fruit, and may be called var. *angustata*.*

As everywhere in the desert, at similar altitudes, the Larrea bushes were a marked feature of the landscape. Many other rugged shrubs, including several species of *Opuntia*, contributed to its rough and forbidding aspect. About them the desert winds had heaped fine sand, in which often they were half buried; and growing in this were to be found *Dithyrea californica*, several species of Oenothera, and other annuals. So far indeed is the desert from being a vegetationless waste, that few are the spots so dry, so barren, that there some plant does not manage to exist.

Isomeris arborea* Nutt. var. **angustata. Fruit narrowly oblong, 4 cm. long, 5 mm. thick, 3-5-seeded, uninflated and conformed to the seed.

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THE RIVERSIDE BOTANICAL CLUB

The Riverside Botanical Club met on Friday evening, October 18th, in the botanical laboratory of the High School to discuss and prepare a program of work for the Club season of 1907-'08. As it had already been decided to spend the season in the study of the local genera and species of Composites, it only remained to apportion the work among the members, and decide on the best way to make the programs as practical and instructive as possible. It was decided to follow the sequence of genera used by Abrams in his "Flora of Los Angeles and Vicinity." Each member will be responsible for a genus in turn, and may get as much help as he or she may see fit; and in discussing the characteristics of the genus before the Club use the black-board or chart or any other available method of presentation, with the object of making the principal characters of each genus so thoroughly understood that all may be helped in recognizing it whenever it is found.

Mrs. Wilder was appointed to prepare a report on the international rules of nomenclature.

This Club was organized in July, 1903, and has been working along with a small but steady membership, and has been successful in bringing the local botanists together for study and the mutual friendliness that springs up among people who are interested in the same lines of work and study. The meetings are largely informal, there are no financial obligations, no attempt is made to make the meetings "popular" or "entertaining" except to those actually interested. We meet on the Friday evening nearest the full moon for the benefit of members from out of town, from October to June of each year.

FRED. M. REED, *Secretary.*

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THE DEER OAK

By Willis L. Jepson

The deer oak (*Quercus Sadleriana* R. Br. Campst.) has an exceedingly limited range, being found only on the high mountain slopes of northwestern California and adjacent Oregon. If its range be extended it must be looked for in the Oregon coast region northward, for it is not at present known to the north of Curry county. Although so restricted in distribution it is remarkably abundant in the Marble Mountain country, on the Klamath Range east of Crescent City, and in the Siskiyous, at elevations of 4000 to 9000 feet. On the trail from Cudahay valley to Cottage Grove I passed, in the summer of 1907, through several miles of it where it monopolized the ridge to the exclusion of all other shrubs. It is equally abundant in many places on both slopes of the Klamath Range. I noticed that the mules of the pack train ate it greedily, preferring it to other chaparral and refusing Brewer oak.

It grows 1 to 12 feet high, at the higher altitudes with the stems at base hugging the ground down hill, showing the effects of winter snow. While it is most abundant on open chaparral slopes, it is also markedly shade tolerent and is common in the white fir forests. The Klamath Range has long been periodically fire-stricken, but this condition has been no disadvantage to this oak in competition with other plants as it stump sprouts readily.

It flowers in July. The variation in the number of stamens is unusual, even for an oak. On Trinity Summit, Humboldt county, I made, in 1902, a count of 21 flowers in the field with the following results:

4	flowers	had	5	stamens
1	"	"	6	"
4	"	"	7	"
1	"	"	8	"
4	"	"	9	"

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2 flowers had 10 stamens
3 " " 12 "
1 " " 14 "
1 " " 17 "

The acorns, which have a kernel sweet and palatable even to the white man, are eaten by deer aad bear, whence the folk names "deer oak" and "bear oak."

Notes on California Plants

In the first number of this volume Mr. Parish calls attention to the reported occurrence of *Quercus Morehus* Kellogg, on Catalina Island, doubting its presence there on account of the absence of both of its parents. Undoubtedly he is right. I feel sure that it is a mistaken identification, and the species reported should have been *Quercus Macdonaldi* Greene. This somewhat resembles the arboreal forms of *Q. Morehus*, but is more nearly related to *Q. lobata* or *Q. Douglasii*, being deciduous. Professor Sargent regards it as a form of the evergreen *Q. dumosa.*

Layia carnosa T. & G. (*Madaraglossa carnosa* Nutt.) is reported as occurring from San Diego to Marin county. It is quite plentiful on the sands at Samoa, near Eureka, Humboldt county.

Helianthella Cannonae Eastw. This species, when described, was known only from the San Francisco peninsula. Recently I found it on the Berkely hills east of Grizzly Peak, growing amid the chaparral. Mrs. Brandegee tells me that she has seen it near Laundry Farm, at the foot of Redwood Peak, but has regarded it as a hybrid between *Wyethia* and *Helianthella.* In no locality where I have seen it is there either of the supposed parents except *Wyethia.*

Alice Eastwood.

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COMPILATIONS

Under this head it is our intention to publish each month, or as often as space may permit, either entire reprints or synopses of articles which appear in journals not accessible to those who have limited library facilities. Other botanists are cordially invited to contribute, both by sending material for this department, or by pointing out where it may be obtained.

CLAYTONIA PERFOLIATA Donn, Ind. Hort. Cantab. 25. 1796. Willd. Sp. Pl. **1**: 1186. 1798.

C. foliis enerviis, radicalibus rhombeo-ovatis, caulinis subconnatis, floribus umbellato-verticillatis, petalis integris. W.

Claytonia perfoliata Donn. ind. hort. cantab. p. 25.

Durchwachsene Claytonie. W.

Habitat in America boreali. Annual. (v. v.)

Folia radicalia petiolata rhombeo-ovata enervia, subcarnosa, scapus erectus quadri f. quinqueuncialis, foliis caulinis duobus oppositis, vel oblique rhombeo-ovatis basi attenuatis cohaerentibus, vel ovatis uno latere connatis, altero emarginatis. Flores bini vel tres in medio scapi supra par foliorum indicatum pedunculati folio unico parvo oblongo suffulti. Flores denique sex vel octo umbellati in apice scapi pedunculati absque bracteata. Petala alba integra. W.

Differt a C. sibirica, cui similis; floribus albis duplo minoribus, petalis integris, inflorescentia, foliis enerviis, caulinis subconnatis, et radicalibus rhombeo-ovatis. W.

The above description is copied from Willdenow, and both Britton in the Illustrated Flora, and Piper in the Flora of Washington, cite it as the original one. If the name in Ind. Hort. Cantab. is without description, or if a description is given there and differs from that of Willdenow, I should consider it a great favor to have the facts communicated to me. According to the description, the plant we have commonly called *Claytonia perfoliata*, then *Montia perfoliata*, and now *Limnia perfoliata*, is probably some other species.

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THE GENUS CHLOROPYRON

By A. A. Heller

In Proc. Cal. Acad. **1**: 61. 1855, Dr. H. H. Behr published the genus *Chloropyron*, based upon *C. palustre*, a plant of the salt marshes about San Francisco. Up to 1885 the plant was unknown to eastern botanists, being placed as a synonym of *Orthocarpus floribundus* in the Synoptical Flora, issued in 1878. In 1885, in Bull Cal. Acad. **1**: 128-151, Mrs. Curran published a list of the species named by Drs. Kellogg and Behr, and Mr. Bolander. The true status of this plant was then made known —that it is the same as *Cordylanthus maritimus* Nutt.

In June, 1902, I chanced upon it for the first time in the marshes back of Tiburon. My first thought was that it might be an *Orthocarpus* or perhaps a *Castilleja*. And I still think as I did then, that it could be equally as well placed in either of these genera as in the one where it now rests. Or, in other words, that it is out of place in any of them. Accordingly, Dr. Behr's generic name may again be brought into use, and the related species transferred to it. *Cordylanthus* or *Adenostegia Kingii*, although placed in the same section with the *Chloropyron* species, does not have the same habit, and is not here included. The species are as follows:

Chloropyron maritimum (Nutt.)

Cordylanthus maritimus Nutt.; Benth. in DC. Prodr. **10**: 598. 1846.

Chloropyron palustre Behr, Proc. Cal. Acad. **1**: 61. 1855.

Adenostegia maritima Greene, Pittonia **2**: 181. 1891.

A coast species, ranging from San Diego north to Humboldt county, and strangely enough, reported from San Bernardino county, at a considerable distance from the coast. The type of the genus, and quite fittingly so, it being the first published species.

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Chloropyron canescens (Gray)

Cordylanthus canescens Gray, Proc. Am. Acad. **7**: 383. 1868.

Adenostegia canescens Greene, Pittonia **2**: 181. 1891.

A species of the Great Basin, ranging from eastern California to Salt Lake, Utah, in saline soil.

Chloropyron Parryi (Wats.)

Cordylanthus Parryi Wats. Am. Nat. **9**: 346. 1875.

Adenostegia Parryi Greene, Pittonia **2**: 181. 1891.

This is also a Great Basin plant, known only from southwestern Utah.

Chloropyron molle (Gray)

Cordylanthus mollis Gray, Proc. Am. Acad. **7**: 384. 1868.

Adenostegia mollis Greene, Pittonia **2**: 181. 1891.

A local species, known only from the marshes at the mouth of the Sacramento about Vallejo, Benicia and Suisun. It differs from the other species in having two instead of four stamens, but the habit and general appearance of the plant is the same.

A significant fact is that all the *Chloropyron* species are found in salt marshes near the coast or in saline soil in the interior. All of the *Adenostegia* species inhabit the hill country, commonly in gravelly soil.

A New Name

Carduus longissimus

Carduus Americanus Rydb. Bull. Torr. Club, **28**: 508. 1901; not *Carduus Americanus* Greene, Proc. Phila. Acad. **1892**: 362. 1893.

Although discarding names raised to specific rank by other writers in cases where they conflict with later imposed specific names, Dr. Rydberg, in the Flora of Colorado, neglected to dispossess his own names. I therefore assign the above name to this plant, referring to the long stout spines which terminate the involucral bracts.

A. A. Heller.

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EDITORIAL

It is a pleasure to bring to notice the Riverside Botanical Club, composed of a band of earnest botanical workers located in southern California in the midst of orange and lemon groves. The fact that only a few years ago this now beautiful and productive spot was little more than a desert, shows what enterprise and perseverence can do. That this same spirit of progress also enters into their botanical life is very evident. Would that we had more of it in this land of unexcelled botanical opportunity, but with so few active workers! We hope to hear very often of the doings of the Riverside Botanical Club.

Sad to say, we owe our readers an apology, and shall hasten to make it with due humility. At the bottom of page 120 the statement is made that it is "the one weak spot in an otherwise admirable code." Unfortunately, that "one weak spot" was not accurately measured. It should have been enlarged considerably. The very day the last number was mailed we read Professor L. M. Underwood's paper in the October *Torreya* on "The Names of some of our native Ferns," and there discovered that the American code does not recognize the priority right of the varietal name, but that in all cases the varietal name must give way to the specific name, no matter how much older the former may be, or how clear its identity. The number of the *Bulletin of the Torrey Botanical Club* in which the revised American code is printed is not now at hand, but we examined it some time ago with special reference to the status of varieties, and are of the impression that the wording is the same as that of Canon 9 (c), printed in the May, 1904 number. Unless we are very obtuse, there is nothing in the wording of that paragraph indicating that a specific name *always* has precedence over a varietal one, but *only* in the case of similar names in the same genus. The former is not a just interpretation, and is at variance with the principle of priority. The editor has nothing to lose either way, for he does not describe varieties and never expects to, but

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he does not believe in the principle of advocating priority and then deliberately making exceptions. However, since the Germans at Vienna decided against the validity of varietal names, and the Americans have apparently done likewise, with this parting protest he is going to join the ranks of the majority. But he is going to try to keep within the confines of the law, and incidentally will stretch out his hand and point out the way back to the straight and narrow path of rectitude to any erring brother who may stray therefrom.

In the October number of the current volume of the *Botanical Gazette* Miss Mary A. Day has a timely article on "Some Perplexities of the Indexer." In summing up, the following recommendations are made: "(1) Indicating clearly each new species, combination, or name; (2) not allowing a name to appear as new when it has been published previously; (3) always giving the correct authority, or, where the parenthesis is used, the correct double authority; (4) stating clearly the category to which each name, below the specific, belongs; and (5) in no way distorting or altering the rank of names attributed to other authors." It is very important that all new names be plainly indicated. The printing of all new names in black type is an easy matter, and should become a uniform practice. It is quite generally understood that the absence of an author's name after a name in parentheses indicates the writer of the paper as the author of a new combination, yet one sometimes finds instances of this usage when no publication of a combination is intended. And by all means let us have full citations, instead of the slipshod manner, entirely to common, of making new combinations by merely giving the old name in parentheses and nothing else. In manuals and floras, a very simple and satisfactory way is to list at the end of the volume all new names published in the work, and the pages on which they occur. This has been done in Small's Flora of the Southeastern United States," and in Mackenzie's "Flora of Jackson County, Missouri."

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Los Gatos, California.

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MUHLENBERGIA

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Volume 3 No. 9

MUHLENBERGIA

A. A. HELLER, Editor

LOS GATOS, CALIFORNIA, JANUARY 16, 1908

NEW PLANTS FROM THE GREAT BASIN

BY AVEN NELSON AND P. B. KENNEDY

The writers have continued, as time would permit, their studies of the flora of Nevada and adjacent territory. Much that is of interest always develops in the study of any considerable collection, but this is particularly true when the collection comes from our vast, and, to a large extent, yet unexplored arid or semi-arid west. Years must probably elapse, and collection upon collection be amassed, before we shall be able to understand this flora that so strikingly bears the marks of its environment. If these notes and descriptions contribute even a mite to its fuller understanding, the mission of this little paper will have been fulfilled.

Erythronium multiscapoidea (Kellogg) n. comb.

Fritillaria multiscapoidea Kellogg, Proc. Cal. Acad. **1**: 46. 1855.

Erythronium grandiflorum var. *multiflorum* Torr. Pac. R. Rep. **4**: 146. 1857.

Erythronium purpurascens Wats. Proc. Am. Acad. **12**: 277. 1877.

This plant has no doubt been secured a number of times, but mention may be made of a recent collection of it by Mr. C. G. Gulling, near Quincy, Plumas county, Calif., March, 1905.

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Oligomeris ruderalis (Nutt.) n. comb.

The genus *Oligomeris* has thus far but five species assigned to it. In Torr. and Gray, Fl. N. A. **1**: 125, there was published as a new genus and new species *Ellimia ruderalis*, based on a manuscript by Nuttall. This plant was by DeCandolle (Prodr. **16**: 587) referred to *Oligomeris subulata* (*O. glaucescens* Camb.). Since that time Nuttall's species has been allowed to rest in synonymy. Admitting that Nuttall's genus is a homonym, there seems to have been good reasons why the species should not have been rejected.

Four of the five species belong to South Africa. The other, *O. glaucescens* Camb., is said to extend from the Canary Islands to India, and also "seemingly indigenous in North America." Aside from the extreme improbability of such a range as that, one may note that the capsule of Nuttall's plants, while 4-lobed like the other, is distinctly bilobed as to each of the main lobes, and that the seeds are materially larger. No doubt other characters equally good could be found were material of both species at hand.

Frequent on dry gravelly mesas at Moapa, Lincoln county, Nevada, May 12, 1905 (1129) P. B. Kennedy.

Lepidium albiflorum n. sp.

A low, much branched biennial, with small white flowers, deeply toothed pinnatifid leaves, and a long tap root. Stems, leaves and pedicels minutely and finely pubescent: leaf segments irregularly distributed and variable in size, sometimes a verticel of dried up petioles from the previous year's growth surrounding the base: flowers pure white: petals oblanceolate, 3.5 mm. long and less than 2 mm. wide, prominently veined: calyx segments ovate, minutely pubescent, apex and margins scarious, 2 mm. long and 1 mm. wide: filaments broad, about 2 mm. long: mature capsule from glabrous to finely pubescent, sub-orbicular, 2.5 mm. long and about as wide, bifid at apex, finely reticulated: style prolonged beyond the capsule .5 mm. to 1 mm.: seeds 1.3

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mm. long and barely 1 mm. wide, very finely striate-tuberculate.

Intermediate between *L. alyssoides* Gray, and *L. montanum* Nutt. The type was collected in somewhat saline soil on wild pasture land in Spanish Springs valley, Washoe county, Nevada, May, 1906, by C. L. Brown (No. 66). What appears to be the same are two sheets collected by F. H. Hillman in 1894.

Krameria Grayi n. n.

K. canescens Gray, Pl. Wright. **1**: 42; not *K. canescens* Willd. ex Schult. Mant. **3**: 303, which properly belongs to a Peruvian species.

Excellent specimens of this species were secured at Moapa, Lincoln county, Nevada, by P. B. Kennedy, May 12, 1905, No. 1095.

Emplectocladus Andersonii (Gray) n. comb.

Prunus Andersonii Gray, Proc. Am. Acad. **7**: 337. 1868.

Amygdalus Andersonii Greene, Fl. Fran. 49. 1891.

In Pl. Frem. 10. *pl. 5*, Torrey established the genus and species *Emplectocladus fasciculatus*. This species was later referred to other genera, but why so strongly marked a genus should have been relegated to synonymy is not clear. Attention is therefore called to it again, and the above species transferred to it.

Boisduvalia sparsifolia n. sp.

Plant 3 to 6 dm. high, erect, simple or with ascending branches above: stems slender, yellowish below, gray-green above: stems and leaves covered with soft villous hairs: leaves few, about 2.5 to 3 cm. long and 2 to 4 mm. wide, linear-lanceolate, acute, margins undulate, entire or very sparingly dentate; the leaves subtending the flowers broadly ovate, apex abruptly acuminate, entire: spike elongated: flowers pink, purple when dry, 5 mm. long: corolla exceeding the 3 mm. long calyx lobes about half, its lobes about 3 mm. long, bifid about one-half their

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length: style 3 mm. long: mature capsule 6 mm. long, densely covered with long hairs, abruptly attenuate at apex, 8-nerved: seeds concave on the inner surface, about 1 mm. long, glabrous, slightly narrowed at one end.

Allied to *B. densiflora*, but about one-half the size in all its parts with a few linear-lanceolate leaves below, and only broadly ovate leaves above subtending the flowers.

The type is deposited with the Nevada Agricultural Experiment Station herbarium, and was collected at Maggie Creek, Elko county, Nevada (No. 644) P. B. Kennedy, August 13, 1902.

Chylisma venosa n. sp.

Annual or biennial, with a stout tap root: plant villous-hirsute, becoming glabrous towards the inflorescence, 4 to 8 dm. high: leaves mostly produced from or near the base, 1 to 2 dm. long, unequally and irregularly pinnate, terminal segment orbicular-ovate, many times the size of the lower segments, light gray (canescent) above and prominently brown-veined and short hirsute below, segments irregularly serrate or lacerate-toothed: calyx tube narrowly obconical, 2.5 mm. long, calyx lobes lanceolate, 7 mm. long and 2 mm. wide: petals yellow, becoming purple, orbicular-obovate, about 8 mm. long and 6 mm. wide: style about 7 mm. long, hairy at base; stigma globose: anthers versatile, 4 mm. long, as long as the yellow filaments: capsule almost glabrous, 20 mm. long, gradually tapering to a pedicel 8 mm. long; seeds ovate-acuminate, 1 mm. long.

Allied to *C. multijuga*, but the plant is villous-hirsute and the leaflets very unequal, with the terminal leaflet obtuse and very much larger than the lateral ones.

The type was collected on sandy washes and canyons in Muddy valley, Lincoln county, Nevada, on May 16, 1906, by P. B. Kennedy and L. N. Goodding, (No. 64).

No. 5188 collected by Marcus E. Jones at La Verken, Utah, on May 7, 1894, is the same, but with slightly larger flowers.

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As indicated above, this plant cannot be the *Oenothera multijuga* of Watson (Proc. Am. Acad. **8**: 595) if any reliance be placed upon that description. The description, was, however, drawn from a fragment, and might properly apply to any one of several species. For this reason it seems well to present this description, and under a new name, so long as Watson's plant remains unrecognized.

Oreocarya Eastwoodae n. sp.

Plant 1 to 2 dm. high, perennial: stems several, erect, pubescent and setose-hispid: leaves closely clustered at base of stems, densely silvery canescent (the younger ones hirsute), linear-lanceolate to somewhat spatulate, 3 to 5 cm. long including the petioles: sepals 6 mm. long in flower and 8 mm. long in fruit, exceeding the nutlets 3 to 4 mm. in mature fruit, hirsute and hispid without: corolla yellowish, its exserted tube 9 mm. long, its lobes orbicular, 4.5 mm. long and 4 mm. wide, appendages conspicuous: style 5 mm. long: anthers 2 mm. long and .5 mm. wide: nutlets 4, close fitting, ovoid, 2.5 mm. long and 2 mm. wide, finely muricate and transversely rugose.

Allied to *O. longiflora*. The specimens taken as the type were collected on the higher slopes of the Mormon mountains, Lincoln county, Nevada, at an elevation of from 3000-6000 feet, by P. B. Kennedy and L. N. Goodding, No. 146, July, 1906. Other specimens to be referred here are from Court House Wash, southeastern Utah (no number), Alice Eastwood; Juab, Utah, No. 1074, L. N. Goodding.

Phlox Gooddingii n. sp.

Perennial, glandular pubescent, loosely tufted, suffrutescent, the previous year's growth persisting on the short densely branched prostrate stems; new annual growth 3 to 5 cm. in length, terminating in from one to several flowers: leaves verticillate, usually two long and three short ones in a whorl, long ones 15 mm. long and 2 mm. wide, short ones 7 mm. long and 1 mm. wide, linear-lanceolate, acerose, a few scattered pairs

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broadly elliptical, slightly revolute: flowers white to pink or pale purple: calyx 7 mm. long, teeth acerose, joined at the base only by a thin membrane: corolla tube 10 mm. long, glandular pubescent; corolla lobes glabrous, suborbicular, 7 mm. long and 6 mm. wide, slightly and unevenly sinuate: anthers 2.5 cm. long: style short, about 3 mm. long.

In general appearance somewhat like *P. Stansburyi brevifolia*, but its short style brings it near to *P. Douglasii*, *P. andicola* and *P. Kelseyi* from which it is easily separated.

The specimens taken as the type were collected on the north slopes of the Mormon mountains, Lincoln county, Nevada, by P. B. Kennedy and L. N. Goodding, no. 103. This species prevailed on the north slopes, while another *Phlox*, perhaps referable to *P. Douglasii*, was abundant on the south slopes.

Types deposited in the Nevada Agricultural Experiment Station herbarium, and in the Rocky Mountain Herbarium.

Hydrophyllum alpestre n. n.

H. capitatum var. *alpinum* Wats. Bot. King Rep. 249. 1871.

Abundant in the vicinity of Reno. There is positively nothing to indicate that it runs into *H. capitatum*.

It has been so well diagnosed by Watson in the place cited above, and by Gray in Syn. Fl. **2**: 154, that it seems superfluous to recharacterize it. The name *alpinum* is preoccupied in this genus.

Plantago Gooddingii n. sp.

Annual, subcaulescent, erect, 1 to 2 dm. high, leaves, peduncles and spikes rather densely lanate canescent: leaves linear-lanceolate, acuminate, 4 to 5 cm. long, 6 to 8 mm. wide, about half as long as the peduncles: spikes dense, 1 to 2.5 cm. long: bract oval, acute, 3 mm. long and 2 mm. broad, scarious, with a thick green midrib, equalling and closely resembling the calyx lobes, somewhat ciliate-lanate: calyx lobes glabrous, not otherwise distinguishable from the bract if separated: corolla lobes white, strongly reflexed, ovate-acuminate, about equalling the

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tube which is scarcely shorter than the calyx: pyxis ovoid, longer than the style, barely exceeding the calyx, circumcissile at the lower fourth: seeds two, brown, smooth, slightly winged.

This species may at times have been referred to *P. patagonica*, but Morris in his discriminating paper (Bull. Torr. Club **27**: 105) on that species and its allies has made it clear that *P. patagonica* is not indigenous within the limits of the United States. Using his key, the present species is nearest to *P. fastigiata*, from which it is amply distinct.

Collected by L. N. Goodding at Rioville, Nevada, May 6, 1902, No. 808a; and by P. B. Kennedy at Moapa, Lincoln county, May 12, 1905, No. 1070.

Symphoricarpos fragrans n. sp.

A handsome, small leaved shrub with very slender, delightfully fragrant pink flowers: leaves oval, from 5 to 10 mm. long and 3 mm. wide, glabrous to minutely hirsute pubescent: calyx 3 mm. long, hirsute, irregularly notched into minute lobes: corolla 9 to 10 mm. long, tube 8 mm. long, lobes 2 mm. long, suborbicular: style 3.5 mm. long with a very few scattered hairs: anthers about 2 mm. long and 5 mm. wide, subsessile, included in the throat.

Collected in a single locality in a rocky canyon at Truckee Pass, Virginia mountains, Washoe county, Nevada, where it is abundant. The type is No. 1313 P. B. Kennedy, June 14, 1906.

Plainly a northern ally of *S. longiflorus*, from which it differs in the size of its leaves, and the size, character and color of the flowers.

A NEW COMBINATION

Sabina megalocarpa (Sudw.)

Juniperus megalocarpa Sudw. Forestry and Irrigation 307. Je. 1907.

New Mexico. A tree, similar to *S. monosperma*, but with very large glaucous 1 or 2 seeded fruits.

T. D. A. COCKERELL.

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NORTHERNMOST STATIONS FOR TWO COMMON CALIFORNIAN TREES

By Willis Linn Jepson

The western plane and the Fremont cottonwood are commonly spoken of as ranging from the lower Sacramento river southward into Lower California. No definite northernmost stations have ever been assigned either. I have seen the plane along the Feather river and on the Sacramento river above its junction with the Feather. The most northerly locality appears to be on the upper Sacramento at Battle Creek, Shasta county, according to Mr. Benjamin Macomber, Principal of the Redding High School, who writes me that it is also said to be near Anderson, five miles north of Battle Creek.

The Fremont or common cottonwood is very common in the upper Sacramento valley, and occurs as far north as Redding. I have seen splendid individuals on Cottonwood creek, Tehama county.

The Name of the White Sage

The white sage of California was first published as *Audibertia polystachya* Bentham, but the genus *Audibertia* is now generally regarded, and with good reason, as congeneric with *Salvia*. In transferring this species to *Salvia* I called it *Salvia Californica*, the specific name *polystachya* being preoccupied. It has now been called to my attention that there is an earlier *Salvia Californica*. The name will therefore be:

Salvia apiana

Salvia Californica Jepson, Fl. W. Mid. Calif. 460. 1901; not *Salvia Californica* Brandegee, Proc. Cal. Acad. II. **2**: 697. 1889.

Audibertia polystachya Bentham, Lab. 314. 1833.

Ramona polystachya Greene, Pittonia **2**: 235. 1892.

Willis Linn Jepson.

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NORTH AMERICAN CASTALIA

By T. D. A. Cockerell

(1) Subgenus *Brachyceras* Caspary.

(1) Castalia elegans (Hook.) Greene

(2) Castalia ampla Salisb. 1806.

(2) Subgenus *Castalia* DC.

(a) Section *Xanthantha* Caspary.

(3) Castalia flava (Leitner) Greene

Rose gives good reasons for separating this from *Mexicana*.

(b) Section *Chamaenymphaea* Planchon

(4) **Castalia tetragona leibergii** (Morong)

Castalia Leibergii Morong, Bot. Gaz. **13**: 134. 1888.

Conard says "the American plant, from its small number of stamens and their insertion below the summit of the torus, may deserve the rank of a variety." Stamens about 40 in the European, 12 to 16 in the American plant.

(c) Section *Eucastalia* Planchon.

(5) Castalia odorata (Aiton) Woodville & Wood

(5a) **Castalia odorata minor** (Sims)

Nymphaea odorata var. *minor* Sims, Bot. Mag. *pl. 1652.* 1814.

"The commonest form in New Jersey."

(5b) Castalia odorata rosea (Pursh) Britton

(6) **Castalia spiralis** (Raf.)

Nymphaea spiralis Raf. Med. Fl. **2**: 45. 1830.

Nymphaea reniformis Walt. Fl. Car. 155. 1788.?

Conard shows that Walter's diagnosis cannot wholly apply to this plant, and no specimens exhist in the Walter herbarium. "Loculis monospermis" applies to *Nelumbo*, and Rafinesque so understood it. Conard calls this plant *N. odorata gigantea* Tricker, 1897, but cites much earlier names.

(7) Castalia tuberosa (Paine) Greene

Boulder, Colorado.

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THE GENUS NAIOCRENE

By A. A. Heller

Ten or eleven years ago when I first saw herbarium specimens of *Montia fontaua*, the then recent transfer of some of the *Claytonia* species to *Montia* did not seem to me to be the proper course. A short time before seeing the *Montia*, I had printed, not published, in my list of Idaho plants of 1896, a combination which I had intended to publish under *Montia*. This doubt concerning the relationship of the plants deterred me from so publishing until an opportunity could be had to properly study the subject. Meanwhile, some of our most conservative botanists adopted these new Montias, and so the matter rested.

Recently in Mem. Nat. Acad. Sci. **10**: 27-37. 1905, Theodor Holm published "A Morphological and Anatomical Study" of *Claytonia*, and shows that "a glance at the literature and a consideration of the species themselves must necessarily convince even the most critical systematist that *Claytonia*, as heretofore defined, can not possibly be confounded with *Montia*, nor *Montia* with *Claytonia*." He argues, however, that because "the floral structure appears essentially the same," the different groups of species should not be separated into genera. The present tendency (and it is likely to continue and grow stronger) is to segregate into separate genera plants which resemble each other, instead of calling them sections of genera. Acting on this principle it will be seen that *Claytonia* is composed of several genera. *Naiocrene*, among others, has already been separated by Rydberg.

Naiocrene filicaulis (Dougl.)

Claytonia filicaulis Dougl.; Hook. Fl. Bor. Am. **1**: 224. *pl. 72.* 1834.

Strangely enough, this plant has long been considered a synonym of *Claytonia parvifolia*, notwithstanding the differences called for in the description and in the illustration. The entire petals and veined leaves at once distinguish it. Mr. E. P.

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Sheldon has sent out good specimens of it under the name *Montia parvifolia*, collected at Seaside, Clatsop county, Oregon, June 24, 1903. This station is about twenty miles south of the mouth of the Columbia. It was originally "plentiful on moist rocks of the Columbia, near the sea," so this station is near the type locality.

Naiocrene flagellaris (Bong.)

Claytonia flagellaris Bong. Mem. Acad. Petersb. VI. **2**: 137. 1831.

Montia flagellaris Robinson, Syn. Fl. **1**: Part 1, 276. 1897.

The type of this was collected at Sitka by Mertens, and the species is not definitely known from south of Alaska.

Naiocrene obtusata

Montia obtusata Heller: Muhlenbergia **2**: 32. 1905.

The remaining species, *Naiocrene parvifolia* (Moc.) Rydb., is probably an aggregate, as it is made to include plants which do not have the same appearance.

Extensions of Range

Lewisia rediviva Pursh, was discovered in Marin county, California, not long ago by Miss Catherine H. Hittell. It grows on an isolated rock in the meadow not far from where the Fairfax and Ross valley roads join. There are several rocks similar in appearance in the same meadow, but on only this one is the *Lewisia* to be found.

Lewisia Leana (Porter) Robinson, is reported from the Siskiyou mountains and Oregon. I found it in the mountains of Trinity county, up Canyon creek. In August, 1905, I found a remarkable extension of its range. It was abundant on a gravelly pass at the foot of Spanish Mountain on the way to Tehipite canyon in the southern Sierra Nevada mountains, California. This mountain is the highest peak near Garlic Meadow.

Alice Eastwood.

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COMPILATIONS

Under this head it is our intention to publish each month, or as often as space may permit, either entire reprints or synopses of articles which appear in journals not accessible to those who have limited library facilities. Other botanists are cordially invited to contribute, both by sending material for this department, or by pointing out where it may be obtained.

OBSERVATIONE SUR LA VEGETATION DE L'ILE DE SITCHA, PAR M. BONGARD. Mem. Acad. St. Petersb. VI. 2: 1831.

This paper is of special interest on account of the supposed occurrence of species first described therein within the western boundaries of the United States, either in the moist regions of the northwest coast at low elevations, or on the high interior mountains. The custom of citing the title of the paper instead of the publication in which it occurred is now happily discontinued. The citation "Veg. Sitch." refers to this paper. The figures after the specific name means the page number on which the description was originally printed.

SALIX SITCHENSIS Sanson mspt. 162. Amentis fructiferis breviter pedunculatis, pedunculo subfoliato; capsulis ovato-lanceolatis tomentosis pedicellatis, pedicello nectarium 2-3 superante, stylo elongato, stigmatibus bifidis (?); foliis oblongo-obovatis obsolete crenulatis, supra pubescentibus, subtus cano-tomentosis.

A Salicibus capraeis longius pedicellatis, nempe a *S. cinerea*, *grandifolia*, *capraea* et *livida* differt: amentis longioribus, pedicellis capsularum brevioribus, et stylo elongato; a ceteris praesertim foliis obovatis subtus cano-tomentosis.

ALNUS RUBRA 162. Foliis lato-ovalibus obtusis dentato-crenatis, dentibus crenulisve serratis, supra subglabris, subtus ad venas pilosis, in axillis nudis.

Rami teretes, juniores glaucescentes, vetustiores rubentes, lenticellis albis obsiti, glabri. Folia petiolata, late-ovalia, ob-

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tusa, grosse dentato-crenata; dentibus s. crenulis serratis, serraturis obtusiusculis; supra glabra, in nervis tantum pilis vestita, subtus (in sicco) subferruginea, ad nervos venasque pilosa, in axillis nuda, 2½ pollic. longa, 2 pollic. lata. Petioli semunciam circiter longi, pubescentes, juniores pilosi. Pedunculi feminei ramosi, glabri: strobuli ovati.

Nomen specificum a vulgari denominatione, qua Rossi Sitcham inhabitantes, hanc alnum designant, desumptum.

LUETKEA SIBBALDIOIDES. Tab. 2. 130. Radix repens, tenuis, fibrosa, ramulosa, perennis. Caulis longe repens, bipedalis et imo ultra, parum angulosus, pilosiusculus, penna corvina tenuior, ramosus. Rami sparsi, erecti, foliosi, breves, steriles sesquiunciales, fructiferi duplo longiores. Folia alterna, sessilia, in ramis sterilibus dense congesta, in fertilibus magis remota, bis- (rarius ter-) trifida; lobulis lanceolatis, acutis; a medio ad basin linearia, angustissima, quasi in petiolum attenuata, semunciam longa, exstipulata. Racemi congesti, pedunculo pedicellisque brevibus albo-villosis, fructiferi elongati; pedicellis 4-5 lin. longis, bracteatis. Bracteae foliis conformes, sed multo minores. Flores parvi, (albi?) in sicco lutescentes. Calyx 5-partitus; lobulis lanceolatis. Petala 5, obovata, cum lobulis calycis alterna, toro calyci adnato inserta, integerrima, sepalis duplo longiora, 1½ lin. circiter longa. 1½ lin. lata. Torus basin calycis ambiens eique totus adnatus. Stamina circiter 20, brevia, longitudine lobulorum calycis, eique mediante toro inserta. Filamenta basi parum dilatata. Antherae globulosae, rima longitudinali dehiscentes. Ovaria 5. Styli totidem filiformes, stigmate parum incrassato obtuso. Carpella 5, libera, oblonga, basi attenuata, parum curva, stylo filiformi incurvo fragili, apiculata, glabra, bivalvia; valvulis apice dehiscentibus. Semina 4, subfusiformia, parti superiori suturae internae affixa, pendula, exalbuminosa. Embryo inversus, dicotyledoneus; cotyledonibus crassiusculis.

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Genus *Spiraeae* maxime affine et notis characteristicis vix distinguendum, nisi habitus omnino alienus separationem suaderet.

Nomen generis in honorem meritissimi navarchi Luetke, itineris circa orbem terrarum ducis, scientiarumque cultoris insignis institutum.

PYRUS DIVERSIFOLIA 133. Foliis ovatis serratis integris trilobisve, utrinque pilosis adultis saepius glabriusculis, pedunculis calycibusque albo-tomentosis.

Inermis. Rami juniores albo-tomentosi, demum senescentes glabri, cinerascentes. Folia petiolata, ovata, acuminata, grosse sed acute serrata, interdum biserrata, integra vel triloba; lobis mox acutis, mox obtusis, medio longiore; basi saepissime obliqua, utrinque pilosa, praeprimis juniora, magis autem in pagina inferiori, quae etiam pallidior, demum saepius glabriuscula, eglandulosa, a 1 ½ pollice ad 3 poll. longa pollicemque lata. Petioli plus minus albo-tomentosi, interdum calvescentes, pollicem dimidium circiter longi, eglandulosi. Stipulae non observatae. Flores corymbosi; pedunculi albo-tomentosi, glandulis 2-3 instructi, rarius glabriusculi. Calyx urceolatus, utrinque albo-tomentosus, rarius extus calvescens, limbo 5-lobo; lobulis lanceolatis, acutis. Petala 5, ovata, obtusa, concaviuscula, breviter unguiculata, venulosa, 5-6 lin. longa et 3 lin. lata. Unguis angustissima, 1 lin. longa. Stamina circiter 20. Styli 3 (rarius 4), mox usque ad medium fere, mox ultra medium coaliti, apice liberi, glabri, stigmate obtuso. Ovarium triloculare, loculis dispermis.

Foliorum forma et pilositate valde ludens.

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EDITORIAL

It is our intention to issue the first number of volume 4 before the end of January if at all possible. There are many things that must be done, but we shall find time to issue this journal as regularly as possible—but we must have articles to print. Do not forget this very important item.

Several kind and thoughtful souls have already sent in their dollar for the 1908 volume, and we tender our best thanks. To those who have not yet sent in their subscription, the editor would say that there is no time like the present for doing a good deed. Do not wait for the formality of a presented bill. There is immediate use for several times the amount of the sum total of the subscriptions. And please do not subscribe through an agency or a dealer. A scientific magazine with a small subscription list cannot afford to pay a comission to an agent, and the small sum one *must* give him is not enough to allow him to make any reduction to the subscriber.

The transcripts of original descriptions which are printed in nearly every number should be of great assistance to many botanists, but in order to make the feature more useful we intend to print a separate index of the names of the species transcribed, as well as of all new species described in this magazine. In order to avoid confusion this index will be placed at the front of the volume. Since volume 2 is not yet completed, only volumes 1 and 2 will be represented in the present index, the figure 1 or 2 placed back of the page number indicating the volume in which the description may be found.

The year 1908 is with us, and the editor has been asked what he intends to do personally about Latin descriptions, and whether he will print English ones for other people. His answer has been and always will be that he most emphatically is going to continue to write descriptions in English, and earnestly

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hopes that all who have the best interests of American botany at heart will do the same. He is not opposed to Latin descriptions on general principles, and if the time ever comes when he takes up the study of foreign plants, will probably think seriously of writing Latin descriptions. What we should try to do is to encourage, not hinder, the study of plants in this vast home territory of ours, many parts of which are almost unknown botanically. Writing about our plants in an alien tongue will not advance the work. Although we are now making considerable headway as compared with conditions a few years ago, we need many more field workers, and they should not be embarassed with a foreign language. And has it occurred to you how foolish it is to be so kind and obliging to foreigners (who passed this rule) while making the work difficult for our own people? Some Europeans, especially the Germans, are engaged on works like the "Pflanzenreich," and of course they want things made easy. Their educational system is different apparently from ours. At least their botanists know more about Latin than do ours, and perhaps the study of botany is more restricted there to the graduates of the great universities. Latin descriptions simplify matters for them. That is the whole thing in a nutshell. To those who may feel timid about opposing the wishes of foreign botanists, we will say that the wording calls for the describing in Latin of "new groups." That means orders, families, genera, etc., for a species is not a "group." We have had our say, and intend to cheerfully continue the writing of descriptions in English of American plants for American botanists, or for anyone else who can read English.

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